Applicant hereby claims priority to U. S. Application No. 60/313,763 filed on August 20, 2001.

BACKGROUND OF THE INVENTION

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1. FIELD OF THE INVENTION

The present invention relates to a method for isolating minimal distinguishing stimuli in design verification and software development.

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2. BACKGROUND ART

A. COMPUTERS AND SOFTWARE

15   A computer has a central "brain" called a processor that controls what the computer is going to do. The processor does this by doing a series of tasks or operations, and doing them very quickly. The thing that determines which tasks or operations a processor is going to do is called a program.

20   A program is a long list of instructions that tell the processor what to do. The processor typically gets one instruction at a time, performs some operation based on the instruction, and then moves to another instruction, and so on. The processor does not necessarily perform the instructions of a program in order. Instead, the processor can jump

around. It may execute two or three instructions in a row, then based on the results of those instructions, jump back, skip ahead, or continue in sequence. The processor may even begin executing another program before it has completed the first, or it may decide to stop altogether.

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Like books, computer programs must be written. The person who writes programs is called a programmer, or software developer.

b. SOFTWARE DEVELOPMENT

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Software development is the writing of a computer program. Software development typically proceeds in several stages. The first step is that the software is written. This is a substantial effort, as many computer programs contain hundreds of thousands of lines. (A program is typically written in what is called a software code or language, so a program is

15 often said to have so many lines of "code"). After a program is written it must then be tested. If there is something wrong with the software it must then be fixed. Once the software is fixed, the development process is complete and the program is ready to use.

The testing and fixing of software is an important part of the software development

20 process and can be very time consuming. An error in a program is called a "bug" and the process of finding and removing software bugs is called "debugging."